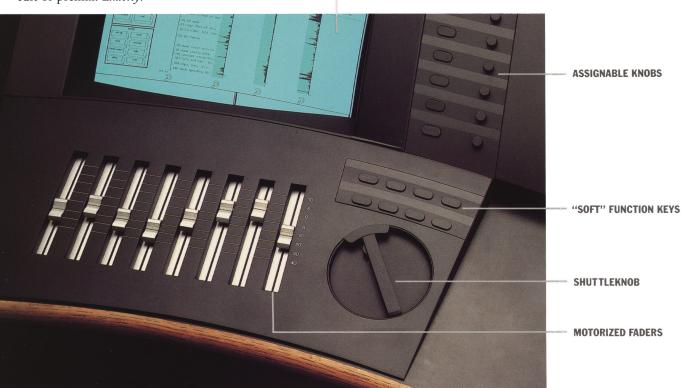
#### **Fully Digital Sound with Instant Access**

SoundDroid performs all of its work digitally so you get the highest fidelity without any generation loss. It gives you access to any sound stored on its disks. Instantaneously. And, since all aspects of the process are automated, including routing and patching, you can always recreate any edit or premix. Exactly.



With SoundDroid, you can control any piece of sound with surgical precision. You can slip-sync, edit, reedit, cut, and adjust. You can pull and combine as many soundtracks as desired—ADR, Foley, special effects, music, whatever. You can move sound elements around at will. Reproduce them in real time for immediate preview. Electronically. Without having to cut or splice a single piece of magnetic film stock or re-recording tape. So you spend less time on the tedious mechanical tasks, and devote more time to the creative aspects of sound design and production.

#### The SoundDroid Console

SoundDroid is compact, streamlined, friendly, and intimate in design. It gives fingertip control of all the basic functions used in audio postproduction, as well as many other functions which currently can only be accessed through the use of extensive outboard equipment.

The SoundDroid console features a touch-sensitive, high-resolution computer screen. Along the bottom of the screen is a bank of motorized faders and along the side of the screen are knobs and buttons which are labeled depending on the function they perform. The console itself is entirely "soft," and the meaning of

each button, knob, and slider depends on the tasks you wish to

**TOUCH-SENSITIVE SCREEN** 

For film or television sound postproduction, SoundDroid uses a video monitor or a projector for displaying picture material. In the lower right, next to the faders, is a Shuttle-Knob for motion control and synchronization.

## **Basic System Configuration**

# The basic SoundDroid system

- Two control computers: one with a touch-sensitive, highresolution graphics screen for user console interaction; another "master" computer to control and schedule the Audio Signal Processor.
- Manual controls: eight knobs with switches, eight motorized faders, a motion control knob, and soft function keys.
- Audio Signal Processor: AES/ EBU digital interfaces for AD/DA conversion and for connecting with digital tape recorders, a high-speed audio controller, and one or more digital signal processors (DSP) with built-in disk controllers. (The system can be expanded to accommodate up to 16 DSPs.)
- One magnetic computer disk: holds about two hours of monaural sound (or 15 minutes of eight-track sound). Up to four disks can be readily attached to a DSP. With two or more disks. the simultaneous transfer capacity is about 16 channels of continuous audio. With an additional adapter, up to 16 disks can be attached to a single DSP.
- Input and output channels: two channels of A/D input (can be expanded to four channels) and four channels of D/A output. SoundDroid can be interfaced to most modern digital audio equipment. SoundDroid is normally locked to house sync, but can also be slaved to any digital audio source or any video source.

For film and television sound postproduction, a video monitor or projector and a motion control device for synchronization are required.

Audio Quality: Determined entirely by the converters. Sound-Droid can transmit, store and process either 16-bit or 24-bit

**Specifications:** 

- **Internal Accuracy:** All internal data are stored in 24-bit form (except on the disk, where 16-bit or 24-bit form may be used, but 16-bit is standard). Summing busses use a 56-bit accumulation register for overload-free summing.
- Sampling Rate: 48 kHz per second for each channel. Other sampling rates such as the AES standards of 44.1 kHz or 32 kHz are available. Additional sampling rates up to 60 kHz are optional. Sampling rate conversion between any of these rates is available as an option.
- Storage Capacity: One disk holding 2 hours of monaural sound at 48 kHz sampling rate and 16-bit samples.
- Processing Capacity: The processing equivalent of about 40 presence filters (second-order sections) is available to the basic system.

#### **Customized Configurations** and/or Turnkey Systems

All-digital sound studios may dedicate individual SoundDroid stations for different tasks, such as mixing, editing, or music synthesis, by choosing the number of DSPs, AD/DA converters, and console computers, and by tailoring the software. All SoundDroids are interconnected by a public Ethernet<sup>™</sup> network, and by a number of AES-format direct digital connections.

#### **Ongoing After-Sales Support** SoundDroid is marketed worldwide

by The Droid Works. It is fully supported by The Droid Works' fulltime field service organization.

Comprehensive maintenance contracts include: preventive maintenance, component swapping, and continuous software upgrades. To minimize maintenance requirements and provide fast turnaround, Sound-Droid features built-in diagnostic programs and a modem which allow remote over-the-phone troubleshooting.

#### Integrated Electronic Post-Production for Both Picture and Sound

For film or television production, SoundDroid works together with EditDroid<sup>™</sup> to integrate the entire post-production process. Your Edit-Droid's Electronic Logbook is shared with SoundDroid for picture referencing and cuing, and any decisions made in picture editing are directly and automatically reflected in the corresponding soundtracks. Sound cuts are then processed by Sound-



Droid, and the original production sound is assembled into the edited version with no generation loss.

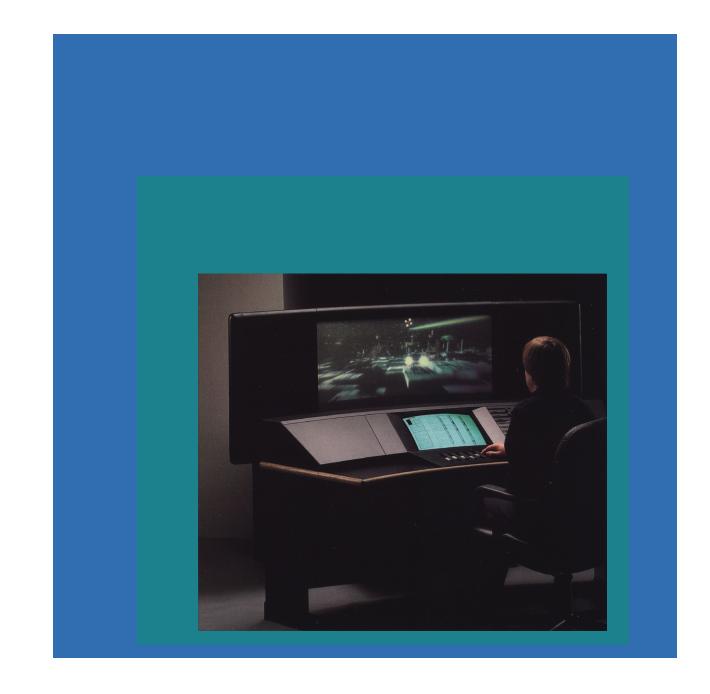
# THE DROID WORKS

An Affiliate of Lucasfilm Ltd. & Convergence Corporation

#### **National Sales Office**

3855 Lankershim Boulevard, North Hollywood, California 91604-3417 Telephone: 818/505-0044 Telex: 330-499 LFL SRFL

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The All-Digital Sound Studio In A Box

#### A Dramatic Breakthrough

SoundDroid is a radical breakthrough in the way sound is edited, processed, mixed, and even synthesized for film and television post-production and music recording.



Everything about SoundDroid is new. The way it looks. The way it organizes, simplifies, and automates all the tasks of audio post-production. Unlike conventional audio systems which employ numerous separate devices, each performing a separate function—recording, mixing, equalizing, and so on—SoundDroid is an all-in-one, general-purpose sound station. SoundDroid is capable of storing, recording, editing, mixing, and processing sound, as well as reproducing it for immediate playback. SoundDroid can even synthesize sound.

#### A Sound Studio in a Box

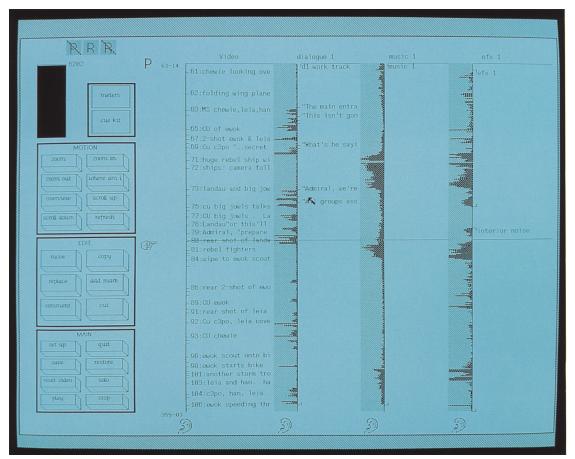
Developed by audio specialists and computer engineers, SoundDroid was designed with the entire sound studio in mind. The basic SoundDroid system will perform all the processing functions normally required in audio post-production, including: editing, multi-track recording, mixing, equalizing, panning, dynamic range control (compression, expansion, hard and soft limiting), reverberation, delay, and flanging. Plus some special effects such as tape loop, pitch shifting, and doppler/fly-by.

Because SoundDroid is completely digital, any new effect, process, or signal routing can be achieved simply by loading SoundDroid with a different software module, rather than by obtaining additional equipment, repatching, or rewiring.

In the future, The Droid Works will provide additional SoundDroid software for more exotic functions such as noise reduction, special effects generation, and sound synthesis.

#### The Screen Displays

The touch-sensitive screen will display a variety of helpful tools depending on what type of work you ask SoundDroid to do. The *Patching Screen* will help you determine the processing setup for each slice in a mix.



SOUNDDROID'S ELECTRONIC CUE SHEET

The Electronic Cue Sheet screen, the basic sound editor's tool, displays picture dialogue and multiple soundtracks for editing. The Electronic Cue Sheet shows a "picture" of the sound itself, as well as information from EditDroid's database. Using the Electronic Cue Sheet, you can break continuous sound into cues, then move, copy, and replace cues, and have them auditioned for you, in context.

The *Meter Screen* will help you check or adjust sound processing levels such as volume, reverberation, or panning. As sounds are played, this screen displays in real time the automation levels for each channel. Bar-graph level meters show input and output,

and filter curves for graphic equalizers change as you adjust them.

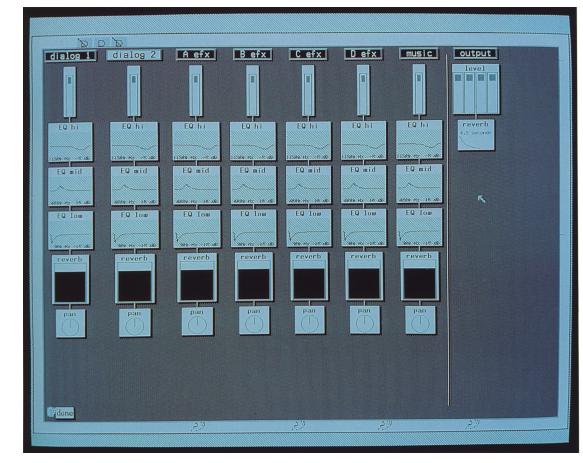
The *Library Screen* will help you retrieve sounds from your sound library, and it will display text and graphic information to locate and audition sounds. When you've located the ones you want, you can simply return to the Cue Sheet to drop them in.

### The Audio Signal Processor

The Audio Signal Processor is the heart of the SoundDroid system. This is a proprietary, very high-speed processor that has been optimized for handling digital audio. It performs all the processing functions of Sound-Droid, as well as retrieving and storing sound on the magnetic disks. Within the Audio Signal Processor is one (or more) of our special DSP (Digital Signal Processor) boards the basic digital sound processing "engine" that permits SoundDroid to manipulate sound. The basic SoundDroid comes with one DSP, and is capable of storing, retrieving, and processing 8 to 16 separate channels of sound in real time.

## Sound Input and Output

Sound may be input into SoundDroid either directly in digital format (in AES/EBU standards) or through SoundDroid's analog-to-digital converters. Similarly, sound may be output either in digital format or as an



SOUNDDROID'S METER SCREEN

analog signal; this enables Sound-Droid to be connected to most professional audio equipment.

#### **Sound Storage**

Large magnetic computer disks are used as the main sound storage device. These disks permit *ultra-fast access* to any stored sound. The disk that comes with the the basic SoundDroid can accommodate up to 2.3 hours of track time.

For off-line storage—such as sound effects or original production sound —The Droid Works will offer high density, DRAW optical disks.

#### **Easy Expansion**

The basic SoundDroid system is capable of performing a variety of functions—editing, mixing, recording, and processing. However, if your productions require a greater number of channels, on-line access to a larger amount of sound, or more screens and faders, SoundDroid is easily expandable to meet your needs:

- Additional DSPs can be added, each enlarging SoundDroid's capacity by 8 to 16 channels.
  With a full configuration of 16 DSPs, a single SoundDroid could process up to 256 channels.
- Each DSP can be configured with up to 16 magnetic disks for increased on-line storage.

Additional console "slices" may also be added. Because of Sound-Droid's unique architecture, the number of console slices is *independent* of the number of channels. Instead, the number of slices on the console depends entirely on your needs, and can be customized to fit your particular production.